

Serial No. 09/960,449
Filed September 21, 2001
Response to Office Action

Remarks

Claims 1-4, 8-11, 13-17, 21-23, and 25 are pending

Only one rejection remains- the rejection of all pending claims under 103(a) as being obvious over U.S. Patent No. 6,179,862 ("US '862") in view of U.S. Patent No. 5,410,016 ("US '016"). This rejection is traversed and reconsideration is respectfully requested in light of the following comments.

A copy of the International Preliminary Examination Report for the related PCT application is attached, wherein claims identical to those in the instant application were determined to be novel and non-obvious in view of the prior art.

As the Examiner explains, US '862 teaches a method for forming a tissue adherent barrier in situ using a sprayer to deliver crosslinkable fluids. One of the fluids specifically described as suitable in the method is a solution of macromer, such as the macromer taught in US '016 (see col. 6, l. 17). In fact, the macromer of '016 is the preferred macromer for use in the system (see col. 6, ll. 18-32). As the Examiner acknowledges, US '862 does not teach a PVA based macromer.

US '016 teaches a macromer and hydrogel formed therefrom. The macromer includes a water soluble core oligomer, having biodegradable extensions that are capped with polymerizable end groups. It is true that PVA is listed as a possible water soluble core oligomer. However, the only macromer specifically discussed is a PEG- oligolactyl-diacylate macromer which has a PEG core unit, a polyhydroxy acid extension on each end, and an acrylate end group on each end. PEG has only two hydroxyl groups - at each terminus- to which the crosslinkable acrylates can be fastened. The claimed macromers, on the other hand, because they are based on PVA, have crosslinkable groups on pendant chains- chains hanging from the backbone. A tremendous advantage of using PVA rather than PEG is that there are many available hydroxyl groups to which crosslinkable or other groups can be attached, and not just two, as in PEG. Thus, the use of PVA as the backbone of the macromers claimed in the present application offers advantages unexpected and unforeseen by the prior art.

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C nclusion

It is respectfully submitted that the references are not appropriate as the basis of rejection of the claims.

Respectfully submitted,



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Listing of Claims

1. (previously presented) A hydrogel wound dressing formed by spray delivery of a liquid composition to the wound, wherein the composition comprises water soluble PVA macromers having one or more pendant crosslinkable groups and the macromers crosslink to form a hydrogel *in situ* on the wound.
2. (original) The wound dressing of claim 1, wherein the hydrogel is degradable.
3. (original) The wound dressing of claim 1, wherein the composition is delivered via an aerosol delivery device.
4. (original) The wound dressing of claim 1, wherein the composition is delivered via a pump spray delivery device.
- 5-7. (cancelled)
8. (original) The wound dressing of claim 1, wherein the composition further contains one or more additives selected from the group consisting of preservatives, biologically active agents, defoamers, wettings agents, leveling agents, hydrating agents, thickeners, fillers, and absorbents.
9. (previously presented) The wound dressing of claim 8, wherein the active agent is selected from the group consisting of growth factors, nitric oxide, antibiotics, anti-inflammatories, analgesics, blood coagulants, and enzymes.
10. (original) The wound dressing of claim 8, wherein the active agent is one which delivers NO to the wound.
11. (original) The wound dressing of claim 1, wherein the dressing debrides the wound when it is removed.
12. (cancelled)
13. (previously presented) The wound dressing of claim 1, wherein the *in situ* crosslinking is in response to redox initiation.
14. (previously presented) A method of forming a hydrogel wound dressing, comprising the step of applying a composition to a wound via spray, wherein the composition comprises water soluble PVA macromers having one or more pendant crosslinkable groups and the macromers crosslink to form a hydrogel on the wound.

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15. (original) The method of claim 14, wherein the hydrogel is degradable.
16. (original) The method of claim 14, wherein the composition is delivered via an aerosol delivery device.
17. (original) The method of claim 14, wherein the composition is delivered via a pump spray delivery device.
- 18- 20. (cancelled)
21. (original) The method of claim 14, wherein the composition further contains one or more additives selected from the group consisting of preservatives, biologically active agents, defoamers, wettings agents, leveling agents, hydrating agents, thickeners, fillers, and absorbents.
22. (previously presented) The method of claim 21, wherein the active agent is selected from the group consisting of growth factors, nitric oxide, antibiotics, anti-inflammatories, analgesics, blood coagulants, and enzymes.
23. (original) The method of claim 21, wherein the active agent is one which delivers NO.
24. (cancelled)
25. (previously presented) The method of claim 14, wherein the *in situ* crosslinking is in response to redox initiation.
26. (cancelled)